

HIBISCUS ROSA-SINENSIS PLANT NAMED 'HEARTBEAT'

BOTANICAL CLASSIFICATION

Hibiscus rosa-sinensis L.

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VARIETAL DENOMINATION

The new plant has the varietal denomination 'HEARTBEAT'.

BACKGROUND OF THE INVENTION

10 The present invention relates to a new and distinct variety of *Hibiscus rosa-sinensis* L., which was developed in a controlled breeding program in Webster, Texas.

The genus *Hibiscus* comprises about 250 species of herbs, shrubs and trees in warm temperate and tropical regions; with leaves usually simple, mostly palmately veined, lobed or parted; flowers mostly solitary in the leaf axils but sometimes in racemes, corymbs or
15 panicles. *Hibiscus* is included in the family Malvaceae, which comprises about 95 genera of herbs, shrubs and trees originating in tropical and temperate regions. *Hibiscus rosa-sinensis* is a glabrate shrub, seldom over 8 feet tall in cultivation, but treelike to 15 feet or more in tropical regions. Leaves to 6-inches long, ovate, usually serrate, mostly glossy green. Flowers solitary in upper leaf axils.

20 The new Hibiscus is a product of a planned breeding program conducted by the inventor in Webster, Texas. The objective of the program was to create new Hibiscus selections with improved bloom quality, color and floriferousness, plants that can be commercially produced on their own root systems, and improved plant habit with regard to vigor and postproduction longevity.

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SUMMARY OF THE INVENTION

The new variety was discovered in a controlled breeding program of *Hibiscus rosa-sinensis* and differs from its parents and other known cultivars of *Hibiscus rosa-sinensis* by the following characteristics in combination:

1. Upright, compact symmetrical plant habit that is suitable for container production;

2. Healthy green foliage;

3. Vigorous growth habit;

5 4. Large dark pink to light red flowers with perfect symmetry and depth of color;

5. Free-flowering.

Asexual reproduction of the new variety by stem cuttings, performed in Webster, Texas and Fulshear, Texas have confirmed that the distinctive characteristics of the new variety are stable and transmitted to succeeding generations, and the new variety reproduces
10 true to type.

COMPARISON WITH PARENTS AND OTHER CULTIVARS

'Heartbeat' is distinguished from its female parent 'Miss Liberty' (not patented) by having a more consistent flower color throughout than the pink blend of 'Miss Liberty'; also,
15 'Heartbeat' had a dark eye compared to the white eye of 'Miss Liberty'. 'Heartbeat' is also a strong, upright, well-branched plant with more disease resistant foliage than 'Miss Liberty'. 'Heartbeat' is distinguished from its male parent 'Burnished Gold' (not patented) by its flower color; flowers of 'Burnished Gold' are a mixture of gold and reddish brown with a smooth surface and no tufting.

20 Plants of 'Heartbeat' can be compared to plants of the cultivar 'Vulcan' (not patented). However, in side-by-side comparisons conducted in Webster, Texas, plants of 'Heartbeat' differ from plants of the cultivar 'Vulcan' in the following characteristics:

1. Flowers of 'Heartbeat' are brighter in color than flowers of 'Vulcan';

2. Plants of 'Heartbeat' are easier to propagate via vegetative cuttings than plants
25 of the cultivar 'Vulcan';

3. Plants of 'Heartbeat' possess healthier foliage and a better growth habit than the cultivar 'Vulcan'.

BRIEF DESCRIPTION OF ILLUSTRATIONS

The accompanying illustrations show a specimen of the new cultivar in a photographic illustration as true to color as is reasonably possible to make in an illustration of this character.

5 FIG. 1 illustrates a side perspective view of a typical plant of 'Heartbeat';

 FIG. 2 illustrates the scale of a typical flower of 'Heartbeat';

 FIG. 3 illustrates the typical young to mature foliage of 'Heartbeat'; the abaxial and adaxial surfaces are shown at each stage; and

 FIG. 4 illustrates a dissected flower of 'Heartbeat', including shape and size of petals
10 and characteristics of the reproductive structures.

DETAILED DESCRIPTION OF THE NEW VARIETY

‘Heartbeat’ has not been observed under all possible environmental, cultural and light conditions. The following observations and descriptions are of plants grown in Fulshear, Texas, in February 2003, under polypropylene shade cloth providing a 30 percent light reduction, and under conditions which closely approximate commercial production. Plants described were approximately one year old and in a #3 nursery container. In this description, color references are to the *Royal Horticultural Society Colour Chart* (2000) and terminology used in the color descriptions herein refers to plate numbers in this color chart. Phenotypic expression may vary with light intensity, cultural and environmental conditions.

10 CLASSIFICATION:

Botanical: *Hibiscus rosa-sinensis* L. ‘Heartbeat’

Parentage

Female or Seed Parent: *Hibiscus rosa-sinensis* ‘Miss Liberty’
(not patented)

15 Male or Pollen Parent: *Hibiscus rosa-sinensis* ‘Burnished Gold’
(not patented)

Propagation: By stem cuttings

Time to initiate rooting: Approximately 14 to 21 days at 21-24 C

Time to develop roots: Approximately 42 to 56 days at 21-24 C

20 Root description: Fine to medium; fibrous; freely branching

PLANT

Size

Height: Approximately 51 cm from soil level
to top of flowers

25 Diameter/Spread: Approximately 60 cm

Form and Growth Habit: Perennial, evergreen shrub; mostly upright and
somewhat spreading.

Branching: Freely branching; approximately 4 to 8 lateral
branches develop after pinching

Lateral Branches:	Approximately 20 cm long and 5 mm in diameter
Internode Length:	Approximately 4 cm

5 LEAF

Shape:	Cordate
Apex:	Rounded
Base:	Cordate
Leaf size:	Approximately 11 cm long and 11.5 cm wide
Arrangement:	Alternate, single; symmetrical
Margin:	Undulate with crenulate margins
Aspect:	Undulate
Texture/Substance:	Scabrous
Coloration	

15	Young Foliage	
	Upper side:	Near Yellow-Green Group 146B
	Under side:	Near Yellow-Green Group 146D
	Mature Foliage	
	Upper side:	Near Green Group 137A
20	Under side:	Near Green Group 137C

Petioles

Size:	Approximately 4 cm long, 3 mm across
Coloration:	Near Yellow-Green Group 144B
Texture:	Smooth

25	Hardiness:	USDA Zone 10 (30°F to 40°F)
	Pests/Diseases:	Resistance to known Hibiscus diseases had not been observed on plants grown under conditions approximating commercial practices.

INFLORESENCE

	Bloom Period	Typically year-round under subtropical and tropical conditions
5	Flower Arrangement:	Arranged singly at terminal leaf axils; free-flowering with 3 to 4 flower buds and/or open flowers per terminal apex; flowers face upright and slightly outward.
10	Flower Appearance:	Ruffled dark pink to light red petals with a darkened eye zone; flowers are open for about two days before closing; flowers persistent.
	Flower Diameter:	Approximately 21 cm
	Buds (just prior to showing color)	
	Rate of Opening:	Approximately 1 or 2 days, depending on temperature
15	Shape:	Elliptic
	Length:	Approximately 3 cm
	Diameter:	Approximately 1.3 cm
	Color:	Near Yellow-Green Group 144B
	Fragrance:	None noted
20	Petals	
	Number/Arrangement:	Corolla consists of 5 overlapping petals
	Shape:	Spatulate with rounded apex
	Size:	Approximately 10 cm long and 10 cm wide
	Margin:	Entire, but lightly ruffled
25	Texture:	Smooth
	Color	
	Upper Surface:	The interior third of the petal starts at near Red Group 53A and fades outward to near Red Group 55B and 55C

Lower Surface: The majority is near Red Group 55C to 55D, eventually fading to White Group N155B at the base of the petal.

Sepals

5 Number/Arrangement: 5 sepals fused into a star-shaped calyx
 Shape: Linear with acuminate apices
 Margin: Entire
 Color: Near Yellow-Green Group 144A

Peduncles

10 Length: Approximately 4 cm
 Diameter: Approximately 3 mm
 Angle: Upright to about 45 degrees
 Strength: Strong, flexible
 Color: Near Yellow-Green Group 144B

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REPRODUCTIVE ORGANS

Androecium

 Stamens: Numerous; approximately 50
 Stamen Length: Approximately 5 mm
 20 Filament Color: Near Red Group 54B
 Anther Size: Approximately 1 mm
 Pollen Amount: Abundant
 Pollen Color: Yellow-Orange Group 15B

Gynoecium

25 Pistil Length: Approximately 8 cm
 Stigma Appearance: 5, rounded
 Stigma Diameter: Approximately 2 mm
 Stigma Color: Near Orange-Red Group 33A
 Style Color: Lower two-thirds near Red Group 53B; fading
 30 to near Red Group 55B on the upper third.
 Seed Production: Seed production has not been observed